

REMARKS

In the Office Action, claims 5-6 and 8-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto et al. in view of Kobayashi, claims 1 and 3-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto et al. in view of O'Conner et al., claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto et al. in view of Kobayashi, and further in view of Bouchard et al., and claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto et al. in view of O'Conner et al., and further in view of Bouchard et al.

As pointed out in the response filed on 6/8/2008, the instant invention is to provide a method of casting surface treatment on the surface of a carbon nanotube field emission display (CNT-FED) to increase the number of carbon nanotubes exposed on the surface of the CNT-FED. The casting surface treatment includes the steps of coating an adhesive material on the surface of the CNT-FED, heating the adhesive material for adhibiting the surface, and lifting the adhesive material off.

With reference to the paragraph in lines 8-24 of page 6 in the instant specification, The adhesive material may be a thermal adhesives or a soluble material. As the adhesive material is heated and melted, it will be softened and attached on the triode structure surface of the CNT-FED closely and uniformly. Applicant would like to point out that the triode structure on a CNT-FED has complicated uneven surface which makes it difficult for an adhesive sheet to contact and attach closely to the surface. Through diligent experiment and practice, applicant discovers that it is necessary to heat and melt the adhesive material so that it is in a paste state that can flow into the complicated

structure to closely attach to the surface.

Okamoto et al. discloses a method of making a field emission cold cathode used in a flat display device, wherein an emitter is made from carbon nanotubes (CNT). An adhesive sheet is brought into contact with a CNT film. Pressing of the sheet activates the adhesion and adhibits the sheet to the CNT film. The adhesive sheet is then lifted off.

It is worth noting that the key difference between the instant invention and the teaching of Okamoto et al. is that an adhesive material which is heated and melted is used for attaching to the surface of the CNT-FED. As pointed out above, an adhesive sheet even if pressed and activated can't be attached closely and uniformly to the surface of the CNT-FED because of the complicated uneven surface of the triode structure. Therefore, the instant invention has an unexpected better result of being able to closely and uniformly attaching the adhesive material to the surface of CNT-FED by melting the adhesive material so it can flow and fill the uneven surface.

In the office action, the examiner admits that Okamoto fails to teach heating the adhesive sheet but cites O'connor's teaching of the equivalency of pressure-sensitive tapes and heat-activated tapes as the evidence of obviousness in substituting Okamoto's pressuring the adhesive sheet with heating the adhesive sheet. Applicant respectfully points out that throughout the teaching of O'connor, the equivalency between pressure-sensitive and heat-activated is only in "activating" the adhesive property. However, the purpose of "heating" the adhesive material in the instant invention is to melt the adhesive material so that it is in a paste state can flow into the triode structure surface instead of activating the adhesive property. Therefore, applicant respectfully

contends that the heating and melting of the adhesive material is neither obvious nor anticipated from the teaching of equivalency by O'connor to one of ordinary skill.

In response to the office action, claim 1 is further amended to particularly point out and distinctly claim the subject matter of the invention in a patentable way to overcome the rejections under 35 U.S.C. §103(a). More specifically, the amended claim 1 now recites the step of heating and melting said adhesive material for attaching said adhesive material on a triode structure surface of said CNT-FED. As discussed above, the step of heating and melting the adhesive material results in unexpected result of closely and uniformly attaching the adhesive material to the surface of CNT-FED. None of the prior arts cited by the examiner has disclosed or anticipated such unique feature of the instant invention.

From the foregoing discussion, applicant respectfully concludes that the amended claim 1 has overcome the rejection under 35 U.S.C. §103(a) and should be patentable. By virtue of dependency, claims 2-4 should also be patentable. Prompt and favorable reconsideration of the application is respectfully solicited.

Respectfully submitted,

/Jason Z. Lin/

Jason Z. Lin  
Agent for Applicant(s)  
Reg. No. 37,492  
Customer No. 33,804